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ABSTRACT

This document consists of two brochures that were developed as part of a land ethics training program for outdoor recreationists. The brochures provide information about techniques that outdoor practitioners can use to help minimize disturbance to backcountry and wilderness areas. Heavy use of popular camping areas can create problems such as overcrowding, soil erosion, campfire scars, pollution of lakes and streams, disturbing noise, and scattered litter. The brochures provide guidelines for planning wilderness trips, traveling in backcountry or wilderness areas, camping, use of fires, appropriate sanitation methods, use of pack animals visiting historical and archeological sites, and backcountry courtesy. Also included is a basic test of outdoor ethics and skills. (LP)

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LEAVE NO TRACE!
AN OUTDOOR ETHIC

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Leave No Trace!

An Outdoor Ethic

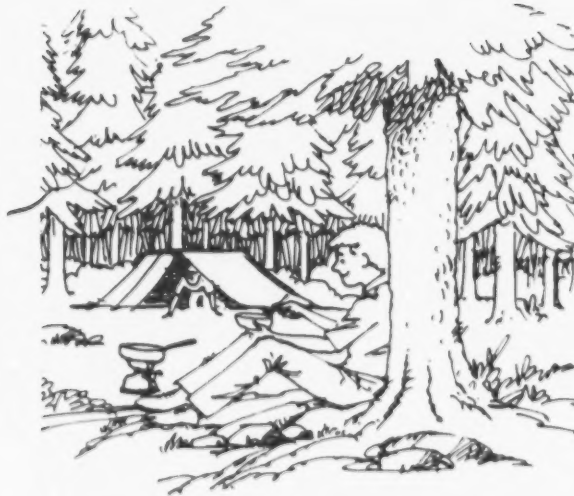


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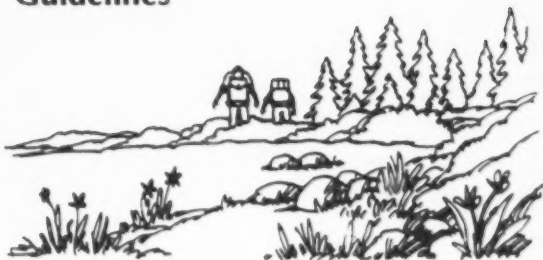
An Outdoor Ethic



More and more people are taking to trails to discover America. On foot or horseback, on mountain bikes or with a llama, there are vast expanses to be explored in national forests, national parks, and on lands administered by the Bureau of Land Management. This trend is not without some problems. Many popular areas are already overcrowded with evidence of people, horses, tents, and campfires everywhere.

Back-country areas are places to seek solitude and a "wilderness experience" away from crowds, noise, and daily pressures of urban life. This escape should be accompanied by a commitment to protect and preserve these areas. **Leave No Trace!** practices are techniques that visitors can use to help reduce evidence of their presence in the back country. By following the **Leave No Trace!** land ethic, visitors can enjoy back-country and wilderness areas congressionally designated under the Wilderness Act of 1964, while preserving the beauty and solitude.

Guidelines



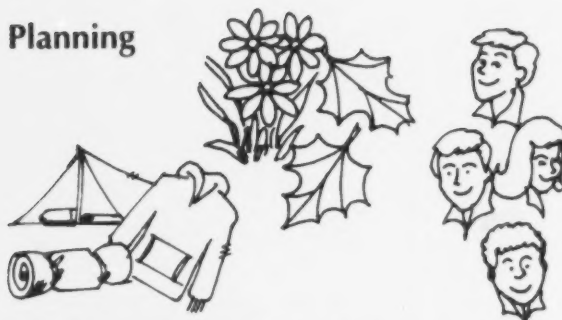
Leave No Trace! guidelines help protect the land and lessen the sights and sounds of your visit.

Because most visitors do not live outdoors, they unknowingly violate the **Leave No Trace!** ethic by:

- Traveling and camping in large groups.
- Traveling off trails or roads, thereby causing scars and soil erosion, and trampling vegetation.
- Leaving campfire scars.
- Leaving human waste and garbage at a campsite.
- Polluting lakes and streams.
- Making loud noises that disturb wildlife and other visitors.
- Wearing brightly colored gear and clothes that make them visible to others in the area (exception: for rescue have a "fluorescent" vest or similar item—include it in your pack).

Practicing a **Leave No Trace!** ethic is very simple: make it hard for others to see or hear you and **Leave No Trace!** of your visit.

Planning



Lots of planning must go into a back-country trip if it is to be safe and fun. Gathering information from Forest Service, Bureau of Land Management, and National Park Service offices can help. They can provide current maps, firsthand information on trails and campsites, and anything else pertinent to the anticipated trip. Consider the group size, when and where to go, equipment, and food selection when planning a trip.

Group Size: Small groups are ideal in open areas such as deserts, meadows, and above timberline. Plan to travel and camp with fewer than 8-10 people, who can be divided into hiking groups of 2-4 during the day. It also is easier to plan for small groups and to keep them together. Campsites for smaller groups are easier to find and they harmonize better with the environment. Check ahead to see if there is a group size limitation in the area you plan to visit.

When and Where to Go: To find maximum solitude, avoid back-country trips on holidays and even some weekends. Since many popular trails and wildernesses always seem to be crowded, visit less popular areas. Plan such trips for the spring or fall, or even the winter.

What's Needed and What's Not: Brightly colored clothing, packs, and tents should be avoided because they can be seen for long distances and contribute to a crowded feeling. Consider choosing earth-tone colors to lessen the visual impact.

Plan to carry a lightweight backpacking stove for all cooking. Be sure to inquire locally about open fire restrictions, since some areas are closed due to the potential for wildfires or the scarcity of fuel.

Lighten your pack by repacking the food and removing glass and aluminum packing. They do not burn and add extra weight. Check for local restrictions prohibiting cans and bottles. IF YOU PACK IT IN, YOU SHOULD PACK IT OUT. Carry extra trash bags for litter pickup in and around your campsite. They also make great emergency rain gear.

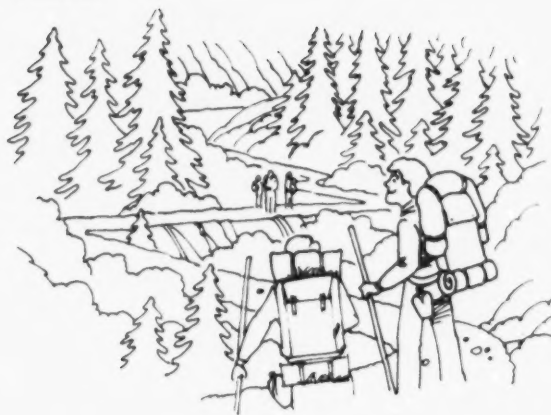
Other suggested equipment is a small trowel or plastic garden shovel for burying human waste and for digging **Leave No Trace!** firepits. Leave the axe and saw at home, unless you are traveling by horse and need them to cut a trail. Firewood that cannot be broken by hand should be left as part of the natural system.

Be Prepared: Obtain a good map, plan your route, and leave your itinerary with someone at home, in case someone has to search for you. Know what weather conditions to expect in that area at that time of year and come prepared for the extreme temperature, wind, snow, and rain you might be exposed to. A day hike requires minimal survival gear: extra food, a signal mirror, whistle, and warm clothing. A highly visible vest ("fluorescent" orange or red) should be included in your pack for rescue in the event you become lost. Carry extra water in desert areas (a minimum of 2 quarts per day per person).

Remember:

- ✓ Plan for small groups.
- ✓ Obtain information about the trip ahead of time and plan your route.
- ✓ Visit a less popular area.
- ✓ Plan an off-season trip if you wish to avoid crowds.
- ✓ Select earth-tone colors (clothing and tents) to blend with the environment.
- ✓ Repackage food.
- ✓ Check on local rules and regulations.
- ✓ Filter or boil water.

Travel



Trails are an important part of back-country travel. They are designed to get people from one place to another with varying degrees of difficulty. Trails are also designed to drain off water with a minimum amount of soil erosion. Make an effort to stay on the trails no matter how you are traveling.

Switchbacks are the most abused portion of the trail system. A switchback is a reversal in trail direction. Many people shortcut switchbacks and create new trails trying to save time and energy. Cutting switchbacks creates a new scar on the hillside that will cause soil erosion and scarring.

Cross-Country: Hiking or riding horses cross-country, off established trails is ok, but remember to stay spread out and off "social trails" that other users have begun. Avoid traveling through meadows and wet areas. They are fragile and will show the effect of footprints or hoofprints and group travel much longer than forested and rocky areas.

Bicycles and motorized vehicles are allowed in some back-country areas but not in wildernesses. To ride them cross-country will create social trails and cause erosion.

The feeling of solitude or adventure is broken when you see ribbons, signs, or even blazed trees that visitors have left to mark a path. Always discuss the planned route with your group members to avoid leaving these markers. If you must mark a route, remove markers before departing.

Remember:

- ✓ Stay on designated trails.
- ✓ Do not cut switchbacks.
- ✓ Plan your route so everyone knows where you plan to be.
- ✓ Select rocky or forested areas when traveling cross-country.
- ✓ Don't mark or blaze your cross-country route.



Camping



Choose a campsite away from popular places for more solitude and privacy. Try to camp 200 feet or more from lakes, streams, meadows, and trails when you have a choice. There will be less chance of damage to fragile areas.

Select campsites in your local area that are designated or already well established. This will concentrate impacts in already disturbed places. Try to confine most activities to areas of the site that are already bare.

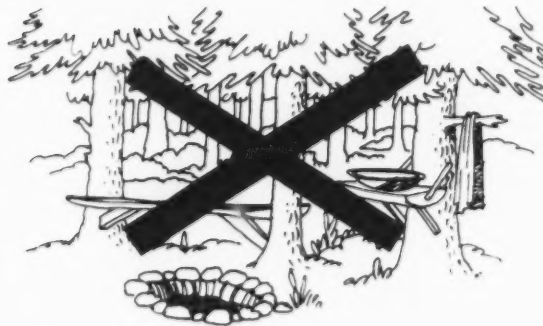
When camping in pristine places, disperse your activities and use extra care. Space the tents, kitchen, and latrine, and try to avoid repeated traffic over any area. Before leaving camp, naturalize the area by replacing rocks and scattering leaves and twigs around the site.

The best campsites are generally found on ridges, hills, or near canyon walls. These areas provide natural drainage so your camp will not flood. To hide it from view, arrange your campsite around trees, rocks, and shrubs. Beware of hazard trees, avalanche areas, potential hazards from falling rocks, or flash-flood sites.

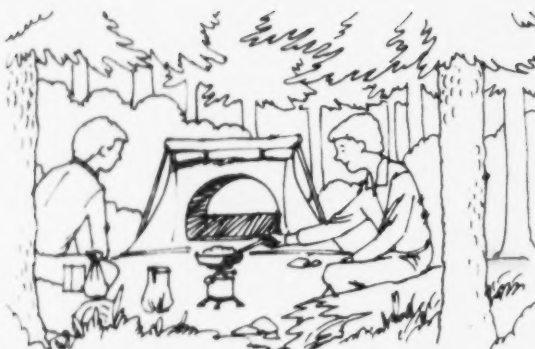
Never ditch or build trenches around your tent because they can start soil erosion and create lasting scars. Limit your stay to as few nights as possible to avoid waste accumulation and injury to plants. One night in each campsite is best and will make it easier to **Leave No Trace!** of your visit when you depart.

Remember:

- ✓ Select a campsite 200 feet or more from trails, lakes, streams, and wet meadows.
- ✓ Hide your campsite from view.
- ✓ Don't dig ditches around the tents.
- ✓ Stay as few nights as possible in one place.
- ✓ Use designated or already impacted campsites when appropriate.



Fires



Practice **Leave No Trace!** ethics by cooking on a stove and avoid building campfires. Today's backpacking stoves are economical and lightweight and provide fast, clean cooking. In some heavily used areas, fires are not permitted. In fragile environments, such as deserts and alpine meadows, fire leaves scars for many years and depletes wood supplies. Ask at the local Ranger Station or District Office about fire restrictions or closures and whether a campfire permit is required in the area you plan to visit.

Heavy-Use Areas: If you are camping in a heavy-use area, there are probably some existing campfire rings nearby that are maintained for this use. Use them to concentrate the use to one area and lessen the overall impact.

Remote Areas: When camping in remote areas, you may choose to build a campfire, making sure the site is away from trees and shrubs. Campfires are best built on a sandy spot or hard ground since the scar can easily be hidden there. Never build a fire next to a rock because smoke will blacken it. Wildfire can easily start from campfires built on forest duff or peat.

With your trowel, dig up the organic layer of soil and set it aside for later use. Avoid encircling the fire with rocks. There is a misconception that the rocks will keep a fire from spreading. Actually, the rocks may explode from intense heat, and the blackened rocks are hard to conceal.

Wood: Burning small sticks gathered from the ground is the best source of wood. Use only down, dead wood. Never cut green trees or branches; they won't burn. Standing dead trees will burn but are valuable for cavity-nesting birds and aesthetics, so don't cut them. Small wood will burn completely, providing good coals for cooking. The remaining white ash is easier to dispose of than partially burned logs. Remember, never leave a fire unattended.

Leave No Trace: In heavily used camping areas, some fire rings are maintained and should be used. Make sure your fire is dead out before you pick out trash that did not burn. To verify that the fire is out, sprinkle it with water and stir the coals. If the coals are cold to the touch, the fire is out. The remaining ash and coals should be carried several hundred feet from the campsite and widely scattered. After you pick up the trash to carry home, your campsite area is ready for the next visitor. A last-minute check of your site for cigarette butts or gum wrappers, etc., will help ensure that you **Leave No Trace!**

In remote areas, follow the same procedures and then replace the organic material you set aside earlier. Be sure to completely naturalize the area. If you think all this is a bother, difficult, and dirty—it is! Cooking on a stove eliminates these problems.

Remember:

- ✓ Use a lightweight stove rather than building a fire.
- ✓ Check local Ranger Station for fire regulations.
- ✓ Use existing fire circles in heavy-use areas.
- ✓ Save sod for naturalizing fire rings.
- ✓ Build fires away from trees, shrubs, rocks, and meadows.
- ✓ Burn only small sticks.
- ✓ Make sure the fire is dead out.
- ✓ Scatter the ashes and naturalize the area.

Sanitation



Sanitation practices in the back country require extra effort. Washing and the disposal of human waste must be done carefully so the environment is not polluted and fish and aquatic life are not injured. Water can become polluted from the runoff of soaps, food waste, and human waste. Toilet paper and other trash also leave an unsightly impact.

Water and Washing: There are Giardia bacteria and other contaminants in many streams, springs, and water sources, so plan to filter or boil all drinking water. Wash at least 50 feet away from camp and any water sources. For personal washing, use a container and rinse away from water sources. For kitchen waste, scrape burnable food scraps into the campfire or put it in a plastic bag to be carried out and then wash dishes away from water sources. Use small amounts of biodegradable soap. Washing without soap would be better since any soap can pollute lakes and streams. Pour wash water on the ground at least 50 feet from water sources and the kitchen area.

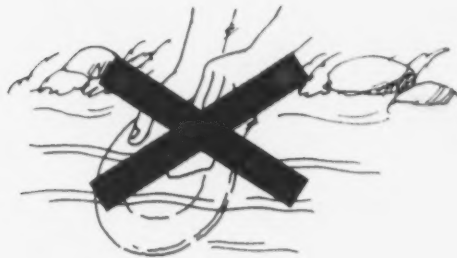
Human Waste: Use the "cat method" of making a shallow hole and covering it when done. It should be dug in the top 6-8 inches of organic soil and be at least 200 feet away from camp, trails, and water sources. Groups may need to walk well over 200 feet to ensure that catholes are scattered during their stay at that site.

Latrines concentrate impacts and should be used only outside wildernesses when large groups are staying for a long time in popular areas. Locate the latrines at least 200 feet away from camp, trails, and water sources. Dig a hole at least 12 inches deep, add soil after each use, and fill in once it is within 4 inches of being full.

Trash: If your back-country trip has been well planned, there should not be too much trash. Never bury your trash because animals will probably dig it up. While you're hiking, make an effort to pocket all trash, including cigarette butts, and then empty your pockets into a trash bag later. Remember that peanut shells, orange peels, and egg shells are trash. IF YOU PACK IT IN, YOU SHOULD PACK IT OUT.

Remember:

- ✓ Do all washing away from camp and water sources.
- ✓ Dig catholes 200 feet or more from camp, trails, and streams.
- ✓ Burn food scraps completely in the fire or put them in a plastic bag and carry them out.
- ✓ Pack it in. Pack it out.
- ✓ Obtain special guidelines for grizzly bear country.



Pack Animals



Many people enjoy animal packing in back-country areas where permitted. Pack stock groups must be even more conscientious about Leaving No Trace! than backpackers since animals tend to produce greater impact. Proper planning, with special attention to camp location and confining animals in camp, is needed.

Planning: Extensive planning must go into a pack stock trip. Check with the local office of the administering Federal agency for trail conditions and whether stock is allowed. Some areas are closed to pack animals due to overuse or because the environments are fragile. The fewer animals taken, the less impact on the land. Keeping groups small and carrying lightweight equipment will help reduce the number of animals needed.

Setting Up Camp: When selecting a campsite, first consider your stock. The campsite should be able to accommodate your animals without any damage to the area. As you ride into a potential campsite, look it over and decide whether there is enough feed. In addition to feed requirements, give some thought to wildlife. If the area is overgrazed, your stock may remove feed otherwise needed by deer and elk during winter months. Also, consider where your stock can be watered. Pick a place with a streambank that can withstand hard use and that is downstream from camp. Loose herding for watering causes substantial streambank damage. Avoid lakeshores and soft meadows.

Animal Confinement: Hitchlines, hobbles, and staking are ways to confine pack animals. Hitchlines need to be erected in rocky areas and on good stout trees. Protect bark by using straps or other devices such as "tree savers." Let stock graze freely, using hobbles if they need to be constrained. Picket with metal pins only enough stock to keep others from straying. Stakes or picket pins should be moved every few hours to prevent overgrazing.

Animals should be returned to a hitchline overnight. Temporary corrals are an excellent method of containing pack animals for several days, but should be moved twice daily. They can be built with rope or portable electric fence.

Feed: Feeding pack animals can cause an impact too. Spreading loose hay on the ground may introduce exotic plant species to an area. Instead, pack in a good supply of processed feed for your animals. This will give them a supply of food and prevent overgrazing around camp. Check local regulations, since some areas require certified weed-free hay and grain.

Plan to take enough feed where stock are allowed but grazing is not. Grazing is not allowed in some wildernesses and national parks.



Breaking Camp: It takes extra time to naturalize an area that has been impacted by pack animals. Scatter manure piles to aid decomposition, discourage flies, and to be courteous to other users. Fill areas dug up by animal hooves. Remove excess hay and straw; they do not deteriorate and leave an unsightly mess.

Remember:

- ✓ Keep groups small and carry lightweight equipment.
- ✓ Select a campsite that has enough feed for your stock.
- ✓ Keep stock 200 feet or more from lakeshores.
- ✓ Bring pellets, grain, or weed-free hay to areas where feed is limited or grazing is not allowed.
- ✓ Remove (or scatter) manure; remove excess hay and straw.
- ✓ Use hitchlines, hobbles, and pickets to constrain pack animals.
- ✓ Move picket pins and temporary corrals several times a day.

Historical and Archeological Sites



Many historical and archeological sites are found throughout national parks, Bureau of Land Management areas, and on national forests. You are invited to enjoy and learn from these remnants of the past. Visitors to these sites can help preserve them for the next generation by not disturbing them in any way. Federal law prohibits disturbing historical and archeological sites or removing any objects from them. Do not camp in or near these special features. Camping too near the resources can disturb valuable archeologic information that can never be reclaimed.

Back-Country Courtesy



One of the most important components of back-country ethics is to maintain courtesy toward others. It helps everyone enjoy their outdoor experience. Incompatible or competing activities must share limited facilities and areas. Excessive noise, unleashed pets, and damaged surroundings distract from a quality experience in the back country.

Keep the noise level down while traveling on trails. Radios and tape players do not belong in the back country. If your group meets another group, give uphill hikers the right-of-way. When you encounter groups leading or riding livestock, you should step off the trail on the lower side and let them pass. Stand quietly since some horses are spooked easily.

Keep pets under control at all times. No one wants someone's pets running through the area and frightening people and wildlife. Some wildernesses prohibit dogs or require them to be on a leash at all times.

Wildflowers, picturesque trees, and unusual rock formations all contribute to the back-country beauty we enjoy. Picking flowers, hacking trees, and chipping rocks disturb the natural ecosystem. Please leave them alone and protect them for others to enjoy. Take nothing but pictures...leave with only fond memories.



Produced in cooperation with the USDA Forest Service, the USDI Bureau of Land Management, the USDI National Park Service, and the Izaak Walton League.

For more information on the **Leave No Trace!** ethic, call 1-800-332-4100.

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May 1992

Leave No Trace!

A program to teach
skills for protecting the
wilderness environment

Leave No Trace
1-800-332-4100
Information & Materials



Re 018942



United States Department of Agriculture
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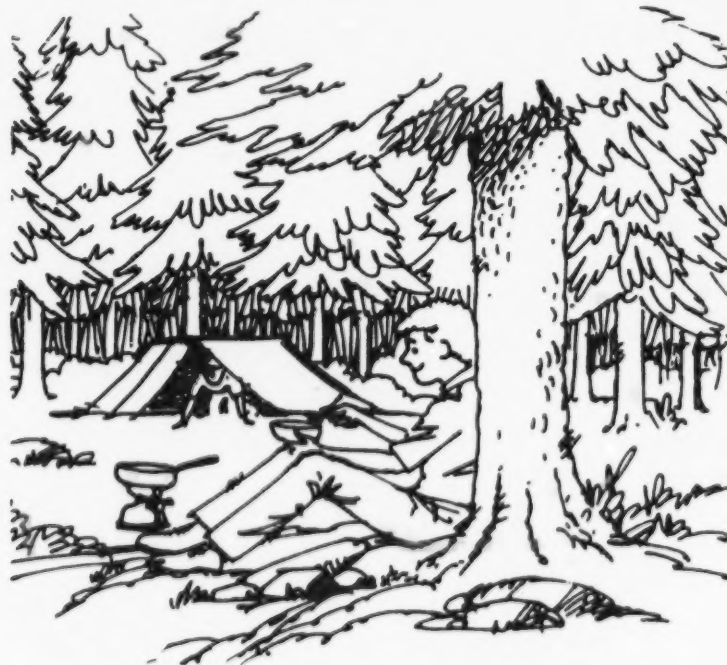
Wilderness

What does the word "wilderness" mean to you? When you plan a trip to the wilderness, what do you expect to find? Write down your thoughts and discuss them with your group.

To most folks, a wilderness is a piece of wild land or back country where they can find solitude, and which looks natural. The imprint of human activities is absent. It is an area where you can be alone and enjoy the outdoors without loud noise, trash, or hustle-and-bustle.

A lot of back country is found in our national forests and other public lands. The Congress of the United States has included some of this back country in special areas called "wildernesses."

Generally, a wilderness has no roads, and motor vehicles are not allowed. Conveniences such as tables, toilets, and fireplaces are not appropriate in a wilderness. The environment is protected so that plants and animals have a natural home. The scenic beauty of the land is much as it was in centuries past.



A Wilderness Challenge



One hundred-and-fifty to 200 years ago, people traveled quietly and carefully. They left little evidence of their trails and campsites as possible in order to minimize the chance of conflict with others and maximize the chance of successful hunting.

Today you and thousands of others look forward to visiting a wilderness or back-country area. In many areas, so many people are coming that the popular camping places are overcrowded—evidence of people, horses, tents, and campfires is everywhere. This heavy use creates some problems. What do you think they are? Write down your ideas and discuss them with your group.

Because most of us do not live outdoors, we unthinkingly do things that mar the scene. Here are some of them:

- ✓ Set up lots of brightly colored tents and other gear and wear brightly colored clothes, which dot the landscape.
- ✓ Crowd into small camping areas in big groups.
- ✓ Make trails across meadows and hillsides.
- ✓ Trample vegetation and cause soil erosion in meadows and near trails, lakes, and streams.
- ✓ Leave campfire scars.
- ✓ Scar or cut green trees.
- ✓ Pollute streams and lakes.
- ✓ Leave and/or scatter human waste and garbage.
- ✓ Make lots of noise, which may disturb other people and wildlife.



Leave No Trace



You can do a lot to protect the wilderness from these problems. That is what this certification program is all about. It is designed to suggest ways you can **Leave No Trace!** the next time you visit a wilderness or back-country area.

After reading and discussing this brochure and successfully completing the test, you will earn a **Leave No Trace!** certificate. Your new-found skills in **Leave No Trace!** will help you to:

1. Travel and camp so others will have a hard time seeing you. You will blend in with the forest environment, much as the Indian people and mountain men did or as the deer, elk, and other wild animals do. You will see more wildlife if you are inconspicuous.
2. **Leave No Trace!** of your visit. You will leave no marks along the trail, and your campsite will be clean and will look natural. You will preserve a true wilderness character for you and others to enjoy in the future.

Now, let us review and discuss how to do it. At the end, you will take the test, and your instructor will grade it. You must pass the test (70 percent or better) to qualify for the certificate.

Pre-Trip Plans

Wilderness trips require lots of planning to be safe and fun. USDA's Forest Service, libraries, bookstores, outdoor equipment stores, and outdoors organizations have good information to help you plan a trip. You can also talk to people who have done a lot of wilderness camping. They may have ideas on proper equipment and supplies.

In this booklet, we will focus on just those items that will help you **Leave No Trace!** when you make your trip.

Group size: Think small! A large crowd is difficult to organize and to keep together as you travel. Campsites for big groups are hard to find, and human waste disposal becomes a problem. Plan for no more than 10 or 12 people—fewer if possible. If your group exceeds 10 or 12, consider going to a large campground with toilets, tables, and paved paths designed to accommodate many people. Large groups are not appropriate in a wilderness.

Where To Go: To get away from crowds and noise, choose a less-popular area for your trip. You may want to go someplace besides a designated wilderness. There is a lot of exciting back country that offers more solitude than a highly publicized wilderness.

When To Go: Most people head for the wilderness in midsummer. If trails are dry, you might enjoy a late-spring or early-fall trip to avoid summer crowds. During the fall few people visit back-country areas, and the scenery is breathtaking.

Another good time to go is during the week when most people are working. Avoid the holiday and weekend rush.



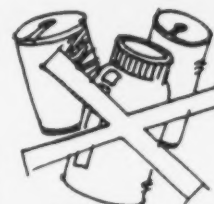
Gear: Fires may not be permitted in some areas because of dry weather or scarce firewood. Carry a backpacking stove so you will not have to eat cold food for the whole trip. Stoves do not scar the landscape as campfires do.



To travel and camp inconspicuously, select dark-colored tents, clothing, and packs when you buy new gear. Earth-tone rusts, browns, and greens blend in best with the forest. Oranges, blues, and other bright colors stand out like spotlights and contribute to a crowded feeling.



Food Packaging: Carry lightweight, nutritious foods in plastic bags or other containers that can be easily burned or packed out. Dried or freeze-dried foods are good choices. Repackage foods from boxes, bottles, and cans into plastic bags to save weight and space.



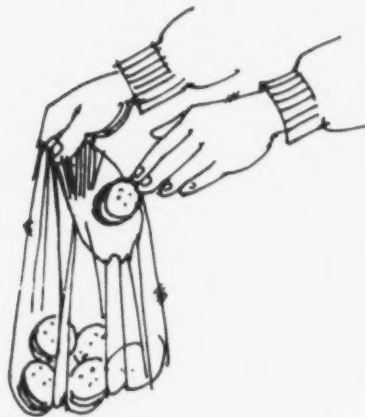
Leave canned or bottled food home. Empty bottles, cans, and aluminum foil must be packed back home. They cannot be buried or burned in the wilderness.

Other Items: Take a trash bag or two to pack out your garbage and litter that others may have left behind. A lightweight shovel, trowel, or ice axe will help you dispose of human waste. (We'll learn more about that later.)



STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to plan a successful **Leave No Trace!** trip?

- ✓ Plan for a group of no more than 10 or 12 people.
- ✓ Obtain information about various areas and regulations governing their use well ahead of time.
- ✓ Select a less-popular area to visit.
- ✓ Plan a spring, fall, or midweek trip to avoid crowds on summer weekends and holidays.
- ✓ When buying packs, clothing, and tents, select dark colors that blend with the forest.
- ✓ Repackage food in plastic bags or other lightweight, burnable, or pack-out containers.



Travel



Trails: Most trails are designed to help you get from one place to another without difficulty and to drain off water with as little soil erosion as possible. While hiking or riding horseback, you should stay on the trail. If you travel to the sides of the trail, others may follow. This starts new paths for erosion and destroys the scenery.

Some folks think they save time by cutting across switchbacks (a trail that doubles back on itself). Cutting switchbacks uses more energy and ends up costing time. It also creates an ugly gully where valuable soil is washed away. Stay on the trail! You will feel better, and the land will look better.

If trails are muddy following spring snowmelt or heavy storms, give them time to dry out before you begin your trip. Then you will not have to wade through the mud and churn up the trail surface, making it rough for others to follow.

Cross Country: If you strike out away from trails, select rocky or hard ground or forested routes rather than meadows and wet places. Then your tracks will not be visible. If you must cross tundra or meadow, spread out to avoid trampling a path through easily crushed vegetation.

Hanging paper signs, tying ribbons, or carving on trees to mark a path for others all detract from the scenery. Mark your travel plan on a map; then let everyone who must follow know where you will be.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to **Leave No Trace!** while traveling?

- ✓ Stay on the designated trail while hiking or riding.
- ✓ Avoid cutting across switchbacks.
- ✓ Let muddy trails dry out, if you can, before traveling.
- ✓ When traveling cross country, select rocky ground or forested areas where your tracks will not be seen.
- ✓ Avoid hanging signs and ribbons or carving on trees to mark cross-country travel routes.



Campsite



Where: You will enjoy more solitude and be less conspicuous if you select a campsite away from the favorite spots. If you do not fish, choose a basin without lakes or choose a lake without fish.

Locate your camp 200 feet or more from lakes, streams, meadows, and trails. Camping next to a busy trail or in full view along lakes, streams, and in meadows robs others of an unmarred scene and a feeling of solitude.

The best campsites are found near small, forested ridges and hills. These elevated sites are warmer than meadows and streamsides where cold air settles at night. They also (usually) have fewer insects and less delicate vegetation to trample.

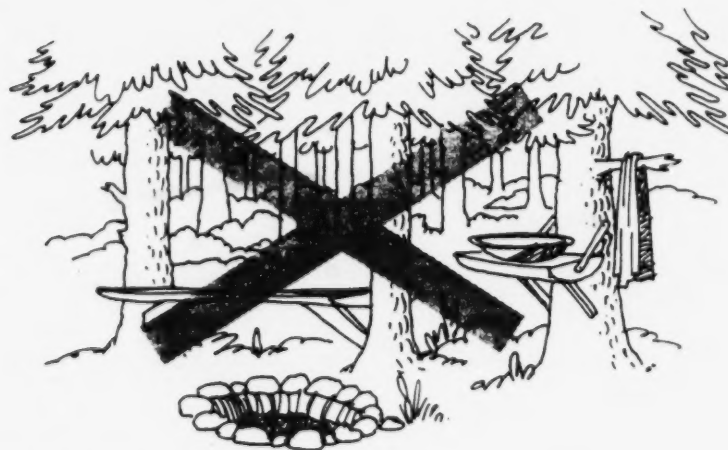
What to Do: Arrange your camp so trees, shrubs, and rocks hide it from view. Not being able to see you will enhance, for others, the feeling of solitude.

If you camp on high forested ground, you will not have to ditch around your tent. Ditches can start erosion and long-lasting scars—just the opposite of a good **Leave No Trace!** camp. Plan to stay in one place no more than 4 days to minimize waste accumulation and avoid injury to plants around the campsite.

Avoid building structures like lean-to's, fire circles, bough beds, and gear racks. Do not cut green trees or boughs. When you break camp, police the area to make sure you **Leave No Trace!** of your visit.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to **Leave No Trace!** of your camp?

- ✓ Select a less-popular site at least 200 feet from trails, lakes, streams, and meadows.
- ✓ Select a spot free of delicate plants. Small forested ridges are good places.
- ✓ Hide your camp from view.
- ✓ Avoid ditching around your tent.
- ✓ Stay no more than 4 days in one place.
- ✓ Avoid building camp structures.



Fires



At heavily used campsites, blackened fire rings dot the landscape and much of the available firewood has been burned. Green trees and limbs are cut for fuel. There is really not much of a wilderness feeling left.

Stoves: Carry a lightweight gas stove with you. You will be assured of fast, clean, cooking heat even above timberline where wood is very scarce. Another plus—stoves **Leave No Trace!** of their use when you move on.

Heavily Used Areas: Fires are not permitted in some heavily used areas. Check at the local Ranger Station to find out about fire restrictions before starting your trip.

If fires are permitted, use an existing fire circle rather than build a new one. Burn charred wood and garbage to a white ash, extinguish the fire with water, and remove bits of garbage that will not burn. Leave a clean fire circle for the next campers.

Little-Used Areas: When camping in little-used areas, you may not find an old fire circle. To build a fire, select a spot away from trees and shrubs. Remove twigs and needles or sod until you reach cool soil, piling them a safe distance from the fire for later use. Resist the temptation to build a rock fire circle. You may want to use a small rock or two to support cooking pots, but a full circle is not needed and does not prevent fire from spreading.

Never build a fire against a large rock where smoke will blacken it for all to see or in a meadow where the scar will stand out. Select a sandy spot or hard ground where the scar can be hidden afterwards.

Wood: Burn small sticks gathered from the ground rather than cut standing dead trees. (Never cut green trees or branches!) Feed the fire slowly to avoid burning nearby vegetation. Small wood will burn completely, providing a bed of clean, hot coals for cooking. When you leave camp, you will not have partially burned logs to dispose of.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to **Leave No Trace!** of your fire?

- ✓ Use a lightweight gas stove rather than build a fire.
- ✓ If fires are permitted in heavily used areas, use an existing fire circle rather than build a new one.
- ✓ Never build fires against large rocks or in meadows. The scars are hard to hide.
- ✓ In little-used areas, save needles and twigs or sod to cover the scar after the fire is out.
- ✓ Avoid building new fire circles.
- ✓ Burn small sticks gathered from the ground rather than cut standing dead or green trees.
- ✓ Make sure your fire is completely out (cold to the touch) before leaving.
- ✓ In little-used areas, cover the fire scar with twigs and needles or replace sod.



Sanitation



Keeping a clean camp will help you avoid sickness *and* protect the wilderness environment from pollution. Besides, human waste, toilet paper, and trash look terrible scattered about your favorite campsite.

Carry a small shovel or trowel to help dispose of human waste and waste water. You will also need a trash bag to pack out non-burnable garbage.

Human Waste: For individuals, dig shallow "catholes" in the top 6 to 8 inches of soil. Catholes should be at least 200 feet away from water, campsites, and trails. Cover feces with soil. Urine need not be buried but should be kept well away from water, camp, and trails.

For a group, dig a trench 12 inches deep and no more than 12 inches wide, at least 200 feet away from water, camp, and trails. After each use, cover feces with dirt and compress with your foot or shovel. When the waste gets within 4 inches of the surface, fill in the latrine and camouflage it with rocks and needles.

Washing: Keeping clean lifts your spirits and prevents disease—a lot more fun than filth and sickness. But don't wash in a stream or lake. Even biodegradable soap pollutes the water and injures fish and other aquatic life.

To wash dishes and clothes or to give yourself a sponge bath, use a bucket or washpan away from the lake or stream. Use biodegradable soap. Dig a small hole and pour the soapy water in it when you are through. Fill in the hole when you break camp.

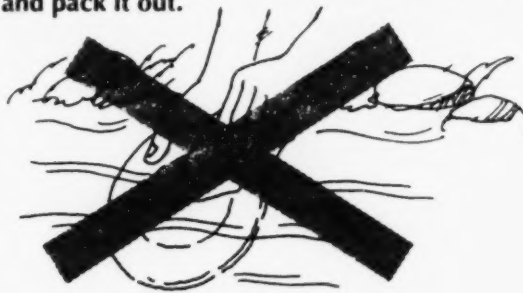
After a sponge bath and rinse, you might want to jump in the lake or stream for a swim. In either case, you will be clean, which will help to prevent water pollution.

Trash: Here is where that trash bag comes in handy. You will want to pack out *every bit of garbage that cannot be completely burned*. Don't bury it. If you plan and package your food properly, you will have very little garbage left over. Pick up trash left by others and carry the **Leave No Trace!** ethic the extra mile—a true "good turn" for all who enjoy the wilderness and back country.

Fish Guts: Bury fish guts in your latrine. Never leave them along lake and stream banks, or toss them in the water. Catch only enough fish to eat at your next meal. Fish spoil quickly, so it doesn't pay to keep them for several days to take home.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to **Leave No Trace!** of human waste, water pollution, or trash?

- ✓ Dig catholes and latrines 200 feet or more from water, camp, and trails.
- ✓ Wash dishes and clothes or take a bath using a pan or bucket well away from streams or lakes.
- ✓ Pour wash water in a hole.
- ✓ Bury fish guts in your latrine.
- ✓ Cover latrines and wash-water holes thoroughly before breaking camp.
- ✓ Pick up every bit of trash that will not burn (yours and others) and pack it out.



Horses

(mules, burros, and llamas, too)



Some people enjoy the companionship of horses in the back country. And some people, because of a disability or limited mobility, may need the help of animals to visit the back country.

Whenever horses or other animals are used for riding and packing, special care must be taken to **Leave No Trace!** To minimize livestock problems, take as few animals as possible—one pack animal for every three or four people in your group. Taking lightweight foods and camp gear will help you reduce the number needed.

Tying: When you unpack, saddle up, or stop for a rest, tie your horse to a stout tree at least 8 inches in diameter. Smaller trees are tender and easily damaged by restless animals and abrasive ropes. Select a dry spot to avoid trampling tender vegetation and wet soil.

If your horse must be tied for a long time, stretch a rope (well above the horse's head) between two large trees in a dry spot. Tie your horse to the rope hitch rail so it can move about freely (reducing the tendency to paw the ground and scar trees and other vegetation).

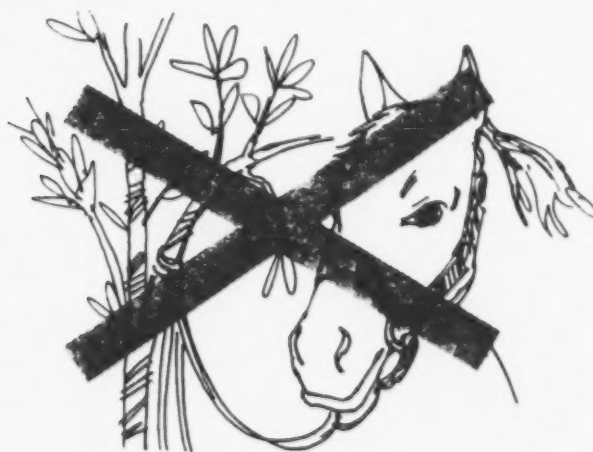
Grazing: Rather than tying livestock, consider hobbling, which allows them to graze over a large area. Again, select a dry spot to avoid trampling vegetation and soil. If you picket, move the animal often, and pull picket pins out when you leave. Hobbling is best because it allows your horse to graze over a large area.

Grazing animals and those animals tied for long periods should be kept well away from lakes, streams, and camp to avoid water pollution and unpleasant conditions created by manure and urine.

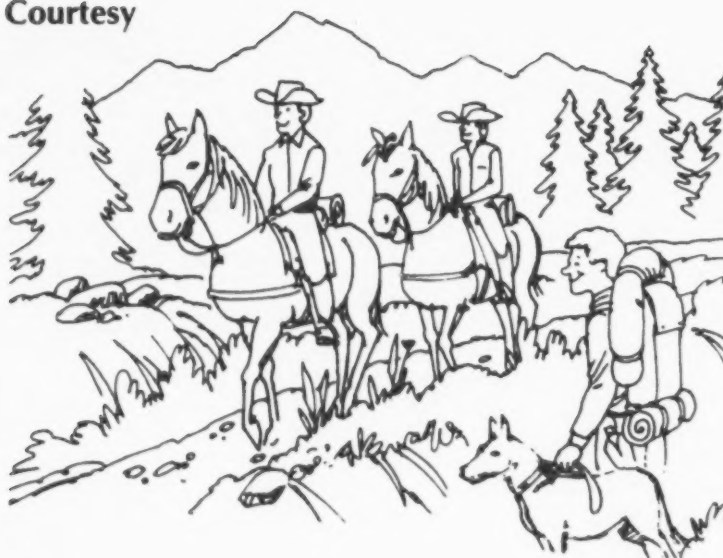
Cleanup: If you follow the suggestions given so far, cleanup will not be a problem. Whenever manure accumulates, scatter it with sticks to prevent flies from gathering and to speed decomposition. The area will look better too.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there other things you can do to **Leave No Trace!** of vegetation and soil damage or water pollution resulting from horses?

- ✓ Take only the minimum number of animals needed.
- ✓ During short stops, tie horses to trees at least 8 inches in diameter.
- ✓ For long periods, tie horses to a high line stretched between two sturdy trees.
- ✓ If you picket horses, move them often
- ✓ Keep tied, picketed, and hobbled horses well away from camp and from lakes and streams.
- ✓ Tie, picket, or hobble horses only in dry areas to minimize trampling damage.



Courtesy



The actions of people and the sights and sounds encountered have a lot to do with whether or not we enjoy a wilderness or back-country experience. We have already discussed many ideas—most of which boil down to good common sense and courtesy. Let us conclude with a few additional suggestions.

Noise: Horses are easily spooked by strange sights and sounds. When hikers and riders meet along the trail, bucking horses and possible injuries to their riders can be avoided if hikers will step off the downhill side of the trail, stand still, and speak softly until the horses pass.

Radios, tape players, loud musical instruments, and loud boisterous activity are out of place in a wilderness. Wild birds and animals are quickly frightened by noise.

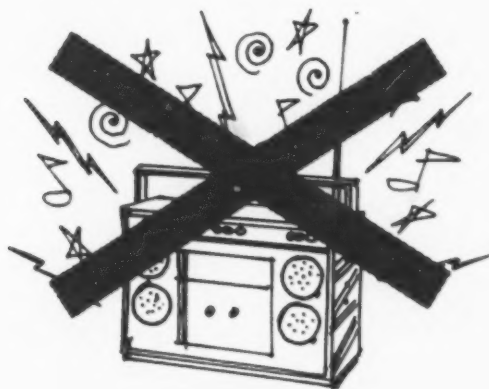
You will see more wildlife, and everyone will have a better time if you keep the noise down while on the trail and in camp.

Pets: Dogs are predators. Their natural instinct is to chase other animals, including strange people. It is really best to leave them at home. If you do take a dog along, keep it under control at all times to avoid frightening wildlife and other people.

Beauty: Wildflowers, picturesque dead trees, and unusual rocks are all part of the wilderness. If you pick the flowers, cut standing dead trees (snags) for firewood, or chip away pieces of rock, much beauty is lost, particularly around popular trails and campsites. Please leave them for all to enjoy.

STOP! Discuss what you have just read with your group. Following is a checklist of the main points. Are there additional acts of courtesy you can perform to enhance another's visit?

- ✓ When they meet, hikers should step off the lower side of the trail, stand still, and talk quietly while riders pass.
- ✓ Avoid making loud music and other noise that disturbs wildlife and campers.
- ✓ Keep pets under control at all times. Better still, leave them at home.
- ✓ Leave flowers and picturesque rocks and snags for others to enjoy.



Test

You must answer 70 percent of the following questions correctly in order to pass this test and become certified in Wilderness Skills.

Are you ready? Is your pencil sharp? When your instructor signals, start the test.

True-False

1. A wilderness looks natural and is an area where you can find solitude without loud noise and trash.
☐ True
☐ False
2. **Leave No Trace!** means you will leave no marks of your visit and your campsite will be left clean and will look natural.
☐ True
☐ False
3. Pre-trip planning will help you **Leave No Trace!** of your visit.
☐ True
☐ False
4. It is best to visit wilderness areas in large groups of 25 or more.
☐ True
☐ False
5. It is better to build fires in wilderness areas than to carry your own small stove.
☐ True
☐ False
6. Since back country is so large and spacious, radios, loud games, and lots of shouting will probably not disturb others.
☐ True
☐ False
7. You can avoid polluting streams and campsites by tying or picketing horses away from these areas.
☐ True
☐ False

8. Horses should be tied to young, small trees since they are not easily damaged.
- ☐ True
☐ False
9. Earth-tone colors such as rust, brown, and green blend in best with the forest.
- ☐ True
☐ False
10. Cutting across trail switchbacks causes soil erosion and mars the scenery.
- ☐ True
☐ False

Choose the best answer:

1. The two basic elements to **Leaving No Trace!** of your visit are: (choose two)
- ☐ a. Be inconspicuous.
☐ b. Wash your dishes in the nearest stream or lake.
☐ c. Bury your garbage.
☐ d. Leave your campsite looking like no one had been there.
2. The size of the group you go with is important. There should be no more than:
- ☐ a. 25 people.
☐ b. 10 or 12 people.
☐ c. 4 people, one dog, three parakeets, and 4 horses.
3. When selecting a site for your camp, you should:
- ☐ a. Get as close to the supply of water as possible.
☐ b. Camp close to a trail so you won't get lost.
☐ c. Camp at least 200 feet from lakes, streams, and trails.
☐ d. Camp in the open so the sun will warm your tent.

4. While you are at your camp, you should: (choose two)
- a. Be as inconspicuous as possible.
 - b. Build new fire rings since old ones look unsanitary.
 - c. Build lean-to's and benches for convenience.
 - d. Bury human waste 6 to 8 inches deep, at least 200 feet from camp and sources of water.
5. Most people go to wilderness areas to:
- a. Exercise and get in good condition.
 - b. Save money.
 - c. Get away from the crowds and noise of city life.
6. The best times to go into wilderness areas are:
- a. During the week rather than on weekends.
 - b. Early in the season.
 - c. Late in the season.
 - d. All of the above.
7. When choosing camping equipment, you should select:
- a. Equipment that is bright and shiny so you can find it in the forest.
 - b. Equipment that is old and worn so it is comfortable.
 - c. Equipment that has dark, earth-tone colors.
8. In planning your food supply, you should:
- a. Make sure the food is in air-tight cans or bottles.
 - b. Re-pack foods into lightweight bags of plastic. Use dried or freeze dried foods.
 - c. Take several kinds of canned soft drinks since they are lightweight and high in sugar for quick energy.
9. When traveling in a wilderness, you should:
- a. Always stay on the main trail and avoid shortcutting across trails.
 - b. Be quiet.
 - c. Keep pets under control at all times.
 - d. All of the above.

Complete the following:

1. The main reason **Leave No Trace!** camping is being emphasized is

2. Activities that are NOT appropriate while in wilderness areas are:

a.

b.

c.

3. Name three things which should be included in your plans for a wilderness camping trip or experience.

a.

b.

c.

4. Describe how you should do the following:

a. Wash dishes and clothes or take a bath. _____

b. Dispose of trash that can't be burned. _____

c. Dispose of human waste. _____

Now the Challenge!



When you pass the test, you will know the basic skills to **Leave No Trace!** in wilderness and other back-country areas. Now go out and practice them! That is the real test. You will have fun as you try to match the skills of Indian people and mountain men in the wilderness 200 years ago.

As you gain proficiency, teach others how. The task for mountain men and Indian people was to survive. Today wilderness is trying to survive the effects of people. Working together—you as the visitor and your Forest Service friends as the managers—we can ensure that wilderness does survive. Thanks for doing your part.

Selections, promotions, and other personnel actions in the USDA Forest Service are based on merit, without regard to race, color, sex, marital status, religion, age, national origin, or any other nonmerit consideration.

May 1992